

Substitute Form PTO-1449 (Notified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 06618-895002	Application No. 10,017,221
Information Disclosure Statement by Applicant <small>(Use several sheets if necessary)</small>		Applicant Nathan S. Lewis et al.	
		Filing Date December 13, 2001	Group Art Unit 3753

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U.S. PATENT & TRADEMARK OFFICE
17 CFR §1.105

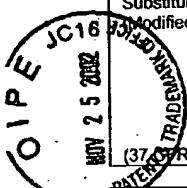
U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
AG	AA	5,846,744	12/08/98	Athey et al.	435	79	<i>RECEIVED SEP 26 2002</i>
AG	AB	5,250,264	10/05/93	Walt et al.	422	820	
AG	AC	5,246,846	09/21/93	Pittner et al.	435	174	
AG	AD	4,927,502	05/22/90	Reading et al.	205	171	
AG	AE	4,644,154	02/17/87	Brogardh et al.	250	227	<i>TG 1700</i>

Foreign Patent Documents or Published Foreign Patent Applications						
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass
AG	AF	WO 94/24561	10/27/94	PCT	GUN	33/573
					Yes	No

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
AG	AG	Wehrens et al., "Calibration of an array of voltammetric microelectrodes", <i>Analytica Chimica Acta</i> , 334 (1996) 93-101
AG	AH	Williams et al., "Resolving combustible gas mixtures using gas sensitive resistors with arrays of electrodes", <i>J. Chem. Soc., Faraday Trans.</i> , 1996, 92(22), pp. 4497-4504

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Examiner Signature <i>AG Magnerola</i>	Date Considered 5/05/04
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(37 CFR §1.98(b))		Filing Date December 13, 2001	Group Art Unit 3753

U.S. Patent Documents

Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
AN	AA	6,315,956	Nov 13, 2001	Foulger			
AN	AB	6,290,911	Sept 18, 2001	Lewis et al.			
AN	AC	6,234,004	May 22, 2001	Revsbech et al.			
AN	AD	6,170,318	Jan 9, 2001	Lewis			
AN	AE	6,134,950	Oct 24, 2000	Forster et al.			
AN	AF	6,134,461	Oct 17, 2000	Say et al.			
AN	AG	6,103,033	Aug 15, 2000	Say et al.			
AN	AH	6,093,308	July 25, 2000	Lewis et al.			
AN	AI	6,085,576	July 11, 2000	Sunshine et al.			
AN	AJ	6,023,163	Feb 8, 2000	Flaum et al.			
AN	AK	6,017,440	Jan 25, 2000	Lewis et al.			
AN	AL	6,013,229	Jan 11, 2000	Lewis et al.			
AN	AM	6,010,616	Jan 4, 2000	Lewis et al.			
AN	AN	5,980,723	Nov 9, 1999	Runge-Marchese et al.			
AN	AO	5,959,191	Sept 28, 1999	Lewis et al.			
AN	AP	5,958,787	Sept 28, 1999	Schonfeld et al.			
AN	AQ	5,951,846	Sept 14, 1999	Lewis et al.			
AN	AR	5,911,872	June 15, 1999	Lewis et al.			
AN	AS	5,891,398	April 6, 1999	Lewis et al.			
AN	AT	5,879,827	March 9, 1999	Debe et al.			
AN	AU	5,876,577	March 2, 1999	McAleer et al.			
AN	AV	5,841,021	Nov 24, 1998	DeCastro et al.			
AN	AW	5,807,701	Sept 15, 1998	Payne et al.			
AN	AX	5,804,100	Sept 8, 1998	Angelopoulos et al.			
AN	AY	5,801,297	Sept 1, 1998	Mifsud et al.			
AN	AZ	5,788,833	Aug 4, 1998	Lewis et al.			
AN	AAA	5,766,934	June 16, 1998	Guiseppi-Eli			

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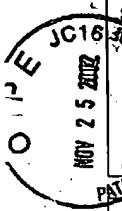
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Substitute Form PTO-1449 JC16 (Modified)		U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 06618-895002	Application No. 10/017,221
Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant Nathan S. Lewis et al.		
		Filing Date December 13, 2001	Group Art Unit 3753	
(37 CFR §1.98(b))				

**U.S. Patent Documents**

Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
Clu	ABB	5,756,879	May 26, 1998	Yamagishi et al.			
Clu	ACC	5,705,265	Jan 6, 1998	Clough et al.			
Clu	ADD	5,674,752	Oct 7, 1997	Buckley et al.			
Clu	AEE	5,536,473	July 16, 1996	Monkman et al.			
Clu	AFF	5,519,147	May 21, 1996	Swager et al.			
Clu	AGG	5,505,093	April 9, 1996	Giedd et al.			
Clu	AHH	5,498,372	Mar 12, 1996	Hedges			
Clu	AII	5,425,869	June 20, 1995	Noding et al.			
Clu	AJJ	5,417,100	May 23, 1995	Miller et al.			
Clu	AKK	5,407,699	April 18, 1995	Myers			
Clu	ALL	5,352,574	Oct 4, 1994	Guiseppi-Elie			
Clu	AMM	5,335,555	Aug 9, 1994	Guizot et al.			
Clu	ANN	5,302,274	April 12, 1994	Tomantachger et al.			
Clu	AOO	5,286,414	Feb 15, 1994	Kampf et al.			
Clu	APP	5,253,329	Oct 12, 1993	Villarreal et al.			
Clu	AQQ	5,225,110	July 6, 1993	Katirgamanathan			
Clu	ARR	5,217,692	June 8, 1993	Rump et al.			
Clu	ASS	5,215,820	June 1, 1993	Hosokawa et al.			
Clu	ATT	5,159,829	Nov 3, 1992	Mayer et al.			
Clu	AUU	4,911,801	Mar 27, 1990	Pons			
Clu	AVV	4,772,559	Sept 20, 1988	Preti et al.			
Clu	AWW	4,719,423	Jan 12, 1988	Vinegar et al.			
Clu	AXX	4,674,320	June 23, 1987	Hirschfeld			
Clu	AYY	4,349,664	Sept 14, 1982	Matsumura et al.			
Clu	AZZ	4,225,410	Sept 30, 1980	Pace			
Clu	AAAA	4,172,721	Oct 30, 1979	Byrne			

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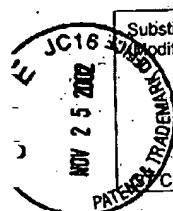
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Foreign Patent Documents or Published Foreign Patent Applications	
Examiner Signature	Date Considered
<i>Ab. Nagendra</i>	5/05/04
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				Filing Date December 13, 2001	Group Art Unit 3753

(CFR §1.98(b))

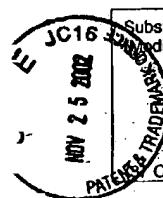
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Ch	ABBB	0 878 711	Nov 18, 1998	EP			
Cu	ACCC	0 717 418	June 19, 1996	EP			
CM	ADDD	11-94784	April 9, 1999	JP			
Ch	AEEE	63-308807	Dec 16, 1988	JP			
Ch	APFF	63-120733	May 25, 1988	JP			
Ch	AGGG	62-257968	Nov 10, 1987	JP			
Ch	AHHH	WO 00/33062	June 8, 2000	WIPO			
Ch	AIII	WO 00/26638	May 11, 2000	WIPO			
Ch	AJJJ	WO 00/00808	Jan 6, 2000	WIPO			
Ch	AKKK	WO 99/67627	Dec 29, 1999	WIPO			
Ch	ALLL	WO 99/66304	Dec 23, 1999	WIPO			
Ch	AMMM	WO 99/61902	Dec 2, 1999	WIPO			
Ch	ANNN	WO 99/53300	Oct 21, 1999	WIPO			
Ch	AOOO	WO 99/53287	Oct 21, 1999	WIPO			
Ch	APPP	WO 99/47905	Sept 23, 1999	WIPO			
Ch	AQQQ	WO 99/40423	Aug 12, 1999	WIPO			
Ch	ARRR	WO 99/08105	Feb 18, 1999	WIPO			
Ch	ASSS	WO 99/00663	Jan 7, 1999	WIPO			
Ch	ATTT	WO 96/07901	Mar 14, 1996	WIPO			
Ch	AUUU	WO 95/08113	Mar 23, 1995	WIPO			Abstract
Ch	AVVV	WO 90/09027	Aug 9, 1990	WIPO			
Ch	AWWW	WO 86/01599	Mar 13, 1986	WIPO			

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
Ch	AXXX	Baldacci et al., "Discrimination of Wine Using Taste and Smell Sensors", <u>Sensors and Materials</u> , Vol. 10, No. 3, pp. 185-200 (1998)
Cu	AYYY	Breheret et al., "On-line differentiation of mushrooms aromas by combined Headspace/multi-odour gas sensors devices", <u>Bioflavour 95</u> , Dijon, France (Les Colloques, no. 75), pp. 103-107, (February 14-17, 1995)

Examiner Signature <i>Ch. Nagarsala</i>	Date Considered 5/05/04
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Substitute Form PTO-1449 (modified)		U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 06618-895002	Application No. 10/017,225
Information Disclosure Statement by Applicant (Use several sheets if necessary) <small>CFR §1.88(b)</small>		Applicant Nathan S. Lewis et al.	RECEIVED DEPT. OF COMMERCE TECHNOLOGY CENTER 3753	
		Filing Date December 13, 2001	Group Art Unit	3753

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Design. ID	Document
CY	AZZZ	Bruschi et al., "Gas sensing with conducting polymer thin film resistors obtained from commercial photoresist patterns", <u>Proceedings of the First Italian Conference</u> , (1996), pp 69-73
CM	AAAAA	Butterworth, et al., "Zeta Potential measurements on Conducting Polymer-Inorganic Oxide Nanocomposite Particles", <u>Journal of Colloid and Interface Science</u> , Vol. 174, pp. 510-517, (1995)
Cl	ABBBB	Casella, et al., "Copper dispersed into polyaniline films as an amperometric sensor in alkaline solutions of amino acids and polyhydric compounds", <u>Analytica Chimica Acta</u> , Vol 335, pp. 217-225, (1996)
Cl	ACCCC	Chandik et al., "Screening for bacterial vaginosis: a novel application of artificial nose technology", <u>J. Clin. Pathol.</u> , Vol. 50, pp. 790-791 (1997)
Cl	ADDDE	Forsyth, et al., "Dielectric properties of conductive composites at microwave frequencies", <u>New Horizons for Materials</u> , 2995, pp. 279-285 (1995)
Cl	AEEEE	Laranjeira et al., "A conductimetric system based on polyaniline for determination of ammonia in fertilizers", <u>Analytical Letters</u> , Vol. 30, no. 12, pp. 2189-2209 (1997)
Cl	AFFFF	Meister et al., "Polymer-Oxide-Silicon-Field-Effect-Transistor (POSFET) as sensor for gases and vapors", <u>Electrochemical Society Proceedings</u> , Vol 97-9, pp 16-22
Cl	AGGGG	Moy et al., "Transient signal modelling for fast odour classification", <u>Bioflavour 95</u> , Dijon, France, (Les Colloques, no. 75), pp. 55-58, (February 14-17, 1995)
Cl	AHHHH	Neaves et al., "A new generation of integrated electronic noses", <u>Sensors and Actuators</u> , B 26-27, pp. 223-231 (1995)
Cl	AIIII	Partch, et al., "Conducting Polymer Composites", <u>American Chemical Society</u> , pp. 368-386 (1992)
Cl	AJJJJ	Paulsson, et al., "Breath alcohol, multi sensor arrays and electronic noses", <u>SPIE</u> , Vol. 2932, pp. 84-90 (3/97)
Cl	AKKKK	Preti, "Analysis of lung air from patients with bronchogenic carcinoma and controls using gas chromatography-mass spectrometry", <u>Journal of Chromatography</u> , Vol. 432, pp 1-11 (1988)
Cl	ALLLL	Rajeshwar, et al., "Polypyrrole composites containing platinum or carbon black: from synthesis to novel applications", <u>Polymer Preprints</u> , American Chemical Society, Vol. 35, No. 1, pp. 234-235, March, 1994)
Cl	AMMMM	Simenhoff, et al. "Biochemical profile of uremic breath", <u>The New England Journal of Medicine</u> , Vol. 297, no. 3, pp. 132-135 (July 21, 1977)
Cl	ANNNN	Tourillon, et al., "Dispersive X-Ray Spectroscopy for Time-Resolved In Situ Observation of Electrochemical Inclusion of Metallic Clusters within a conducting polymer", <u>Physical Review Letters</u> , Vol. 57, No. 5, pp. 603-606 (August 4, 1986)
Cl	AOOOO	Udrea et al., "Design of a silicon microsensor array device for gas analysis", <u>Microelectronics Journal</u> , Vol. 27, no. 6, pp. 449-457 (1996)
Cl	APPPP	Veciana-Nogues, et al., "Biogenic Amines as Hygienic Quality Indicators of Tuna, Relationships with Microbial Counts, ATP-Related Compounds, Volatile Amines and Organoleptic Changes", <u>J. Agric. Food Chem.</u> , vol. 45, No. 6, pp. 2036-2041 (1997)
Cl	AQQQQ	Wampler, "Composites of Polypyrrole and Carbon Black. 2. Electrosynthesis, Characterization, and Influence of Carbon Black Characteristics", <u>Chem. Mater.</u> , Vol. 7, No. 3, pp. 585-592 (1995)
Cl	ARRRR	Yamoto et al., "A new method for dispersing palladium nanoparticles in conducting polymer films and its application to biosensors", <u>Synthetic Metals</u> , Vol. 87, pp. 231-236, (1997)

Examiner Signature <i>OB Magenla</i>	Date Considered 5/05/04
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Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Nathan S. Lewis et al.	
		Filing Date December 13, 2001	Group Art Unit 3753

Other Documents (include Author, Title, Date, and Place of Publication)			
Examiner Initial	Desig. ID	Document	
CM	ASSSS	Lefebvre, et al., "Chemical Synthesis, Characterization, and Electrochemical Studies of Poly (3,4-ethylenedioxothiophene)/Poly(styrene-4-sulfonate) Composites", <u>Chem. Mater.</u> , Vol. 11, No. 2, pp. 262-268 (November 2, 1999)	
CM	ATTTT	Lonergan, et al., "Array-Based Vapor Sensing Using chemically Sensitive, Carbon Black-Polymer Resistors", <u>Chem. Mater.</u> , Vol. 8, No. 9, pp. 2298-2312, (November 9, 1996)	
CM	AUUUU	Freund, et al., "A chemically diverse conducting polymer-based 'electronic nose'", <u>Proc. Natl. Acad. Sci.</u> , Vol. 92, pp. 2652-2656 (March, 1995)	
CM	AVVVV	Slater, et al., "Multi-layer Conducting Polymer Gas Sensor Arrays for Olfactory Sensing", <u>Analyst</u> , Vol. 118, pp. 379-384 (April, 1993)	
CM	AWWWW	Pearce, et al., "Electronic Nose for Monitoring the Flavour of Beers", <u>Analyst</u> , Vol. 118, pp. 371-377 (April, 1993)	
AN	AXXXX	Domansky, et al., "Development and Calibration of Field-Effect Transistor-Based Sensor Array for Measurement of Hydrogen and Ammonia Gas Mixtures in Humid Air", <u>Anal. Chem.</u> , Vol. 70, No. 3, pp. 473-481 (February 1, 1998)	
AN	AYYYY	Stussi, et al., "Chemoresistive conducting polymer-based odour sensors: influence of thickness changes on their sensing properties", <u>Sensors and Actuators</u> , Vol. B43, pp. 180-185, (1997)	
AN	AZZZZ	Bodenhofer et al., "Performances of Mass-Sensitive Devices for Gas Sensing: Thickness Shear Mode and Surface Acoustic Wave Transducers", <u>Anal. Chem.</u> , Vol. 68, No. 13, pp. 2210-2218 (July 1, 1996)	
AN	AAAAAA	Jiang, et al., "Preparation and Properties of Organic Polymer Sub-Micrometer Function Films", <u>Electrets</u> , 1996, 9 th International Symposium on Shanghai, China, September 25-30, 1996, NY, pp. 678-683	
AN	ABBBBB	Bodenhofer, et al., "Chiral Discrimination By Simple Gas Sensors", <u>Transducers</u> , 1997 International Conference on Solid-State Sensors and Actuators, Digest of Technical Papers, Transducers 97, Chicago, IL, June 16-19, 1997, vol. 2, pp. 1391-1394(IEEE),	
AN	ACCCCC	Thackeray, et al., "Chemically Responsive Microelectrochemical Devices Based on Platinized Poly (3-methylthiophene): Variation in conductivity with Variation in Hydrogen, Oxygen, or pH in Aqueous solution", February 14-17, 1995, <u>J. Phys. Chem.</u> February 14-17, 1995, Vol. 90, no. 25, pp. 6674-6679 (November 25, 1986)	
AN	ADDDED	Costello, et al., "Novel composite organic-inorganic semiconductor sensors for the quantitative detection of target organic vapours", <u>J. Mater. Chem.</u> , Vol 6, no. 3, pp. 289-294 (1996)	

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Sheet 1 of 1

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(37 CFR §1.18(e))				Filing Date December 13, 2001	Group Art Unit 3753

U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
AJ	AA	5,512,882	April 30, 1996	Stetter et al.	340	632	
	AB						
	AC						
	AD						

Foreign Patent Documents or Published Foreign Patent Applications						
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass
	AE					
	AF					
	AG					
	AH					
	AI					

Other Documents (Include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
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	AK	
	AL	
	AM	

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Substitute Disclosure Form (PTO-1449)